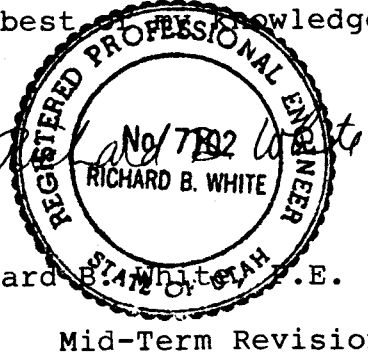
APPENDIX 7-8

Information Submitted in Compliance
With 30 CFR 77.216-1 and 30 CFR 77.216-2

I hereby certify that the design contained herein was prepared by myself and is true and correct to the best of my knowledge.



Richard B. White, P.E.

Mid-Term Revisions 5-30-1986

APPENDIX 7-8

Information Submitted in Compliance With 30 CFR 77.216-1 and 30 CFR 77.216-2

For ease of review, the information contained herein is presented by reference to the applicable regulations. Items contained within the main permit document will be referenced herein.

30 CFR 77.216-1

A permanent identification marker will be installed on the dam of the sedimentation pond near the emergency spillway. This marker will be constructed of a durable material, will measure at least six feet high, and will show the identification number of the pond assigned by the District Manager of the U.S. Mine Safety and Health Administration. The name of the pond will be identified on the marker, along with the name of the owner/operator. This marker will be installed within 30 days following initiation of construction activities on the revised pond.

30 CFR 77.216-2

(a)(1). Owner/Operator: Genwal Coal Company
P.O. Box 1201
Huntington, Utah 84528

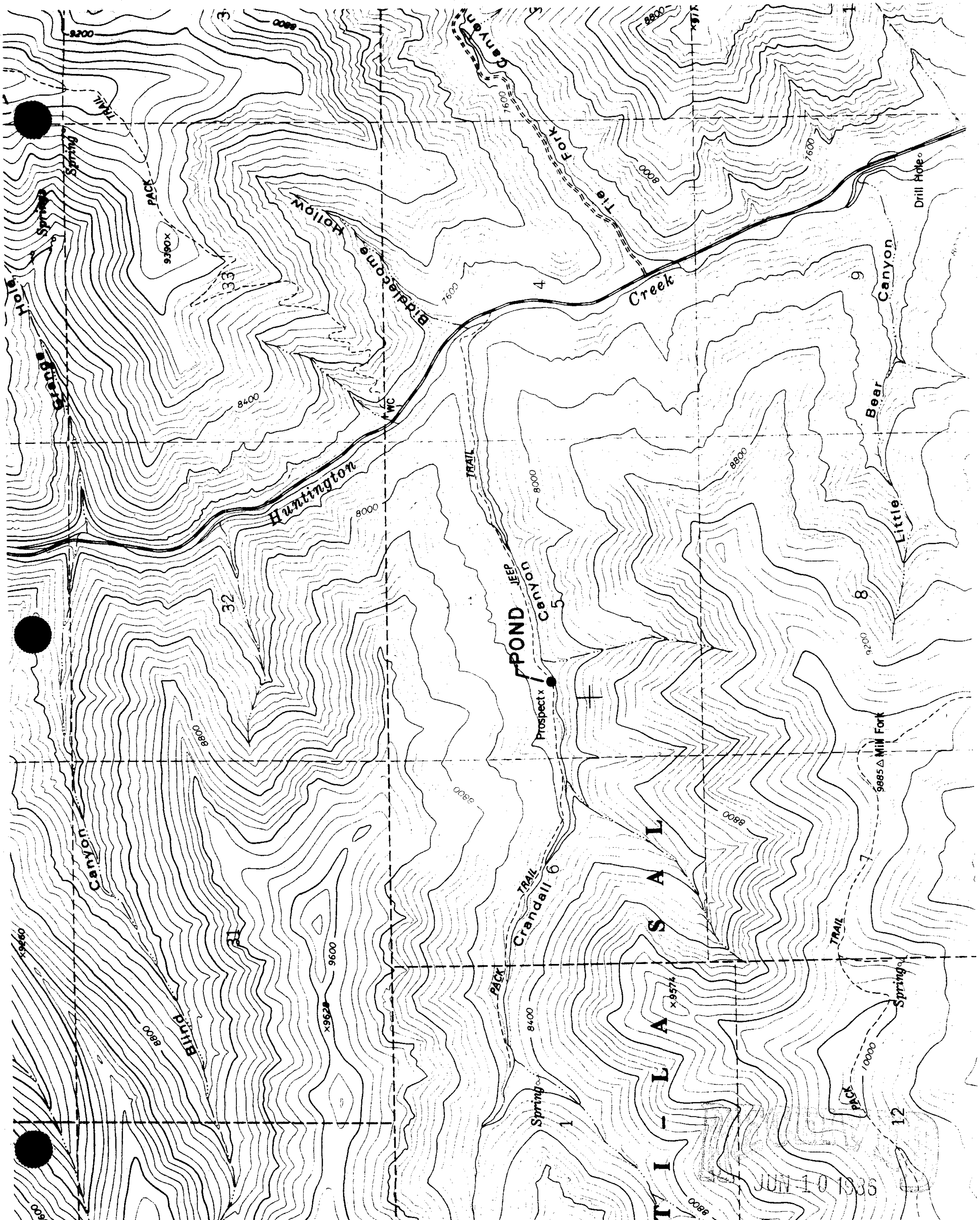
Impoundment Name: Genwal Sedimentation Pond No. 1

Impoundment ID No.: A number has not yet been received from the District Manager of MSHA

MSHA Mine ID No.: 42-01715

(a)(2). See figure on page 2 of this appendix.

(a)(3). The purpose of this impoundment will be to control runoff and sediment yield from the surface facilities associated with the Crandall Canyon Mine of Genwal Coal Company.



(a)(4). This impoundment will pond water from small ephemeral watersheds that exist within the Crandall Creek watershed. The total drainage area contributing to the pond is 10.4 acres, of which 5.5 acres is undeisturbed, 2.7 acres is disturbed, 0.2 acre is pond at design stage, and 2.0 acres is reclaimed.

(a)(5). A description of the physical and engineering properties of the foundation materials on which the impoundment has been constructed is provided in Appendix 7-6.

(a)(6). A description of the type, size, range, and physical and engineering properties of the materials used to construct the dam is provided in Appendix 7-6. The method of site preparation and construction is discussed in Section 7.2.3.2.

This impoundment was originally constructed in October 1983. Revisions to the pond will begin in June or July 1986.

(a)(7). See Appendix 7-4, Plates 7-4 and 7-6, and Section 7.2.3.2.

(a)(8). A piezometer has been installed at the location shown on Plate 7-4 for the purpose of monitoring the phreatic surface in the dam. Additional information concerning this piezometer is contained in Sectiion 7.2.3.2.

(a)(9). See Figure 7-11 and Appendix 7-4.

(a)(10). According to Figure 17 in the book "Design of Small Dams", the probable maximum 6-hour precipitation for genral-type storms at the site is 4.1 inches. Results of analyses to determine runoff from this storm are attached at the end of this appendix. These calculations were made using the unit hydrograph approach discussed in Section 7.2.1.2.

Three storm distributions were used in the runoff determination. In all cases, runoff volume from the PMP was found to be 1.8155 inches (1.57 acre-feet). Peak flows varied from 29.6 cfs using the SCS Type II storm distribution, to 14.4 cfs using the SCS Type B distribution, to 9.6 cfs using the Farmer-Fletcher distribution.

(a)(11). See Appendix 7-4.

(a)(12). See Appendix 7-4.

(a)(13). See Appendix 7-6.

(a)(14). See Plates 3-1, 3-2, and 3-3.

(a)(15). See Section 7.2.3.2.

(a)(16). **See Section 3.5.3.**

(a)(17). **See the certification on the frontal page of this appendix.**

(a)(18). No additional information has been required by the District Manager of MSHA.

(b). The changes and modifications proposed by this submittal will not be initiated until these changes and modifications have been approved by the District Manager of MSHA.

```
**********************************
* EARTHFAX ENGINEERING, INC.     *
*                                *
* HYDROGRAPH GENERATION MODEL    *
*    USING SCS CURVE NUMBER      *
*          METHODOLOGY           *
**********************************
```


IDENTIFICATION: SED. POND INFLOW FROM PMP

INPUT SUMMARY:

```
*****************************************************************
     STORM:                      WATERSHED:
        DIST. = SCS TYPE II          AREA =  0.016 SQ. MI.
        DEPTH =  4.10 IN.            CN = 76.0
        DURATION =  6.0 HR.          TIME OF CONC. =  0.32 HR.
*****************************************************************

*****************************************************************

OUTPUT SUMMARY:
*****************************************************************
     TOTAL RUNOFF DEPTH =  1.8155 INCHES
     INITIAL ABSTRACTION =  0.6316 INCHES
     PEAK FLOW =    29.58 CFS  ( 2.8653 IN/HR)
     TIME TO PEAK =   3.17 HOURS
     RUNOFF VOLUME CHECK =  1.8191 INCHES
*****************************************************************
```

```
**********************************
* EARTHFAX ENGINEERING, INC.     *
*                                *
* HYDROGRAPH GENERATION MODEL    *
*    USING SCS CURVE NUMBER      *
*          METHODOLOGY           *
**********************************
```

IDENTIFICATION: SED. POND INFLOW FROM PMP

INPUT SUMMARY:

```
**********************************************************************
     STORM:                        WATERSHED:
        DIST. = SCS TYPE B             AREA =  0.016 SQ. MI.
        DEPTH =  4.10 IN.              CN = 76.0
        DURATION =  6.0 HR.            TIME OF CONC. =  0.32 HR.
**********************************************************************
```

```
**********************************************************************
```

OUTPUT SUMMARY:

```
**********************************************************************
     TOTAL RUNOFF DEPTH =  1.8155 INCHES
     INITIAL ABSTRACTION =  0.6316 INCHES
     PEAK FLOW =    14.45 CFS  ( 1.3992 IN/HR)
     TIME TO PEAK =   2.57 HOURS
     RUNOFF VOLUME CHECK =  1.8191 INCHES
**********************************************************************
```

```
**********************************
* EARTHFAX ENGINEERING. INC.     *
*                                *
* HYDROGRAPH GENERATION MODEL    *
*   USING SCS CURVE NUMBER       *
*          METHODOLOGY           *
**********************************
```

IDENTIFICATION: SED.POND INFLOW FROM PMP

INPUT SUMMARY:

```
**********************************************************************
     STORM:                        WATERSHED:
        DIST. = FARMER-FLETCHER       AREA =  0.016 SQ. MI.
        DEPTH =  4.10 IN.             CN = 76.0
        DURATION =  6.0 HR.           TIME OF CONC. =  0.32 HR.
**********************************************************************
```

```
**********************************************************************
```

OUTPUT SUMMARY:

```
**********************************************************************
     TOTAL RUNOFF DEPTH =  1.8155 INCHES
     INITIAL ABSTRACTION =  0.6316 INCHES
     PEAK FLOW =     9.57 CFS  ( 0.9266 IN/HR)
     TIME TO PEAK =   1.26 HOURS
     RUNOFF VOLUME CHECK =  1.8191 INCHES
**********************************************************************
```